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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/044,802

01/11/2002

Seymour Levine

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33036

7590

05/20/2008

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EXAMINER

TO, TUAN C

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/044,802	Applicant(s) LEVINE ET AL.	
	Examiner TUAN C. TO	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 15 and 19-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14, and 16-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recite the limitation "a database of the magnetic fields of the earth, said database of the magnetic fields of the earth providing a plurality of 3-dimensional vectors of the magnetic field of the earth corresponding to a plurality of locations, wherein an attitude of the navigation system is determined by the angular difference between a vector of the magnetic field of the earth provided from said database and the magnetic field measured by said 3-axis magnetometer". Although, in the specification, the examiner has found the description of 2-dimensional map database, but none of the disclosures supports for that limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1, 3, 5-12, and 14 are rejected under 35 U.S.C. 102(e) as being unpatentable by Lin et al. (US 2002/0021245A1).

Regarding claim 1, The reference to Lin et al. is directed to an integrated GPS/IMU method and micro-system including all features recited in said claims.

Lin et al disclose several features that are relevant to the following: GPS receiver has first output for providing a signal indicative of the position of the navigation system (see figure 3, page 2, paragraph 0019), a 3-axis magnetometer for measuring earth's magnetic field (see paragraph 0067), said magnetometer has a second output for providing signal (see page 3, paragraph 0047), acceleration sensor measures axis of acceleration of the navigation, having third output (see page 4, paragraph 0066), a rotation sensor measures more axis of rotation, having a fourth output (see page 4, paragraph 0066), a computing device having: several inputs, at least one input

communicates with each of said first, second, third, and fourth of outputs (see figure 1), three-axis rate gyroscope is a MEMS (magnetometer) (see page 4, paragraph 0076), power supplied by a battery (see figures 1, and 9), RF data link (see page 5, paragraph 0088), Kalman filter (see page 6, paragraph 0015).

Lin et al. further discloses sending the earth magnetic field measurement from the magnetometer to the magnetic field processing interface. The attitude data is determined from said received earth magnetic field (see paragraph 0068).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1) and in view of Burgett et al (US 6522298 B1).

As discussed in the previous paragraph, Lin et al disclose all of limitations recited in the independent claims 1 and 55 except for the barometric sensors for measuring atmospheric pressure and providing signals. The second reference mentioned above overcomes the missing feature from Lin et al. Burgett et al. provide a device and method for calibrating and improving the accuracy of barometric altimeters with GPS-derived altitudes. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Lin et al. to include the teachings of Burgett et al. in order to determine the stability of various absolute pressure, and also to maintain the accuracy over a wide temperature range.

Claims 4, 13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1) and in view of Lin (US 6415223).

Claims 4, 13, and 16: The U.S Patent No. 245A1' to Lin et al. disclose all limitation recited in claims 1. However, Lin et al. do not disclose a display means for visually displaying information form the computing device. The second reference to Lin (US 6415223) is directed to a typical navigation system having a display for displaying information (see column 6, lines 3-5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to improve the system of Lin

et al. '245A1 by including said display in order to allow pilot, flight operator or crew member easily retrieves the aircraft data or observes it during the flight.

Lin (US 6415223) additionally discloses a database of the magnetic fields of the earth, wherein said database consists: 2-D map, topographical, oceanographic (see column 5, lines 66 and 67; column 6, lines 1-10).

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 2002/0021245A1) and in view of Billebaud (US 6202931B1), Simmons (EP0697806A1).

In the specification, Lin et al. is missing to point out the memory card that consists of insulating material or corrosion resistant coating. The above-mentioned references to Billebaud and Simmons are both teaching about the memory card that includes the insulating material or corrosion resistant coating (see entire document). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include such the material of said memory card in order to protect the card during the transporting from one place to another place or during inserting or removing the card out of computers or electronic equipments.

Response to Arguments

The applicant's request for continued examination has been fully considered. However, the claims listed above would not be patentable over the cited prior art.

The current added limitations in claim 1 have been rejected since the examiner has found no support for that limitation in the applicant's specification.

The drawings are accepted now.

Conclusions

It appears that the applicant in this application is a *pro se* applicant (an inventor filing the application alone without the benefit of a Patent Attorney or Agent). Applicant may not be aware of the preferred methods of ensuring timely filing of responses to communications from the Office and may wish to consider using the Certificate of Mailing or the Certificate of Transmission procedures outlined below.

CERTIFICATE OF MAILING

To ensure that the Applicant's mailed response is considered timely filed, it is advisable to include a "certificate of mailing" on at least one page (preferably on the first page) of the response. This "certificate" should consist of the following statement:

I hereby certify that this correspondence is being deposited with the
United States Postal Service as first class mail in an envelope
addressed to: "Commissioner of Patents and Trademarks, P.O. Box
1450, Alexandria, VA 22313-1450" on (date).

(Typed or printed name of the person signing this certificate)

(signature)

CERTIFICATE OF TRANSMISSION

Alternatively, if applicant wishes to respond by facsimile rather than by mail, another method to ensure that the Applicant's response is considered timely filed, is to include a "certificate of transmission" on at least one page (preferably on the first page) of the response. This method should be used by foreign applicants without access to the U.S. Postal Service. This "certificate" should consist of the following statement:

I hereby certify that this correspondence is being facsimile transmitted
to the United States Patent and Trademark Office, Fax No. (703)____-
____ on (date).

(Typed or printed name of the person signing this certificate)

(signature)

These "Certificates" may appear anywhere on the page, and may be handwritten or typed. They must be signed, and the date must be the actual date on which it is mailed or transmitted.

For the purpose of calculating extensions of time, the date shown on the certificate will be construed as the date on which the paper was received by the Office, regardless of the date the U.S. Postal Service actually delivers the response, or the fax is "date-stamped" in. In this way, postal or transmission delays do not affect the extension-of-time fee.

In the event that a communication is not received by the Office, applicant's submission of a copy of the previously mailed or transmitted correspondence showing the **originally** signed Certificate of Mailing or Transmission statement thereon, along with a statement from the person signing the statement which attests to the timely mailing or transmitting of the correspondence, would be sufficient evidence to entitle the applicant to the mailing or transmission date of the correspondence as listed on the Certificate of Mailing or Transmission, respectively.

NOTICE TO APPLICANT: In the case of lost or late responses the use of other "receipt producing" forms of mailing a correspondence to the Patent Office, such as Certified Mail, or a private shipper such as FedEx, **WILL NOT** result in the applicant getting the benefit of the mailing date on such receipts. These receipts are not considered to be acceptable evidence since there is nothing to "tie-in" the receipt with the particular document allegedly submitted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan C To whose telephone number is (571) 272-6985. The examiner can normally be reached on from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tuan C To/

Acting Examiner of Art Unit 3663/3600

March 26, 2008

Application/Control Number: 10/044,802
Art Unit: 3663

Page 10